

High Definition Color Monitors

# HTM3203/2003D/ HTM1003



The HTM3203/2003D/1003 are High Definition Color Monitors developed with Ikegami's technological know-how, acquired through years of HDV research. The HTM3203/2003D/1003's exceptional performance meets all video criteria, including high-fidelity video reproduction, stability, and operating flexibility, demonstrating the value of HDTV.

The system such as 1920 x 1080/59.94/2:1, the picture height and the vertical position can be monitored by adjustment.

## HTM3203/2003D/1003



HTM3203 32-inch HD Monitor



HTM2003D 20-inch HD Monitor



HTM1003 10-inch HD Monitor

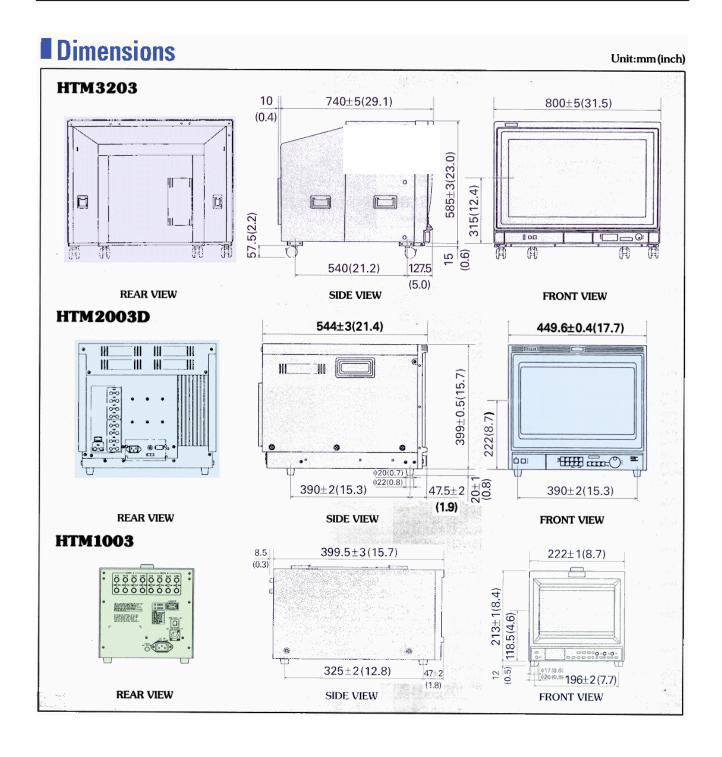
#### **■**Features

- •High Definition in-line gun, dot mask CRT (mask pitch 0.34mm for HTM3203, 0.28mm for HTM2003D, 0.28mm for HTM1003) assures Horizontal resolution of 1000Tvlines for HTM 3203, 900TV lines for HTM2003D(at 1125mode) 500TV lines for HTM1003.
- The circuits are all digitally controlled with 10 bit D/A converter (HTM3203/2003D).
- ●Three different Color temperatures can be placed in memory: 6500'K, 9300'K are standard, and another of your choice (HTM3203/2003D).
- •Beam Feedback System provides long-term white balance stability.
- ●Two Y/Pb/Pr inputs or two RGB inputs are front panel selectable.
- ●Two SYNC/HD inputs and one VD input are also standard (HTM3203/2003D).
- Cross Hatch signal, Window signal (100%) and full-white signal (50%) can be utilized for checking deflection linearity, white balance and purity etc (HTM3203/2003D).
- Degauss ans rotation functions permit correction of purity error due to earth's magnetism (Rotation: HTM3203/2003D).
- •CRT circuit protects against over-current and over-load, X-ray radiation or CRT burn.
- •HTM2003D can be mounted in a 19-inch rack with a 15-3/4-inch height.
- •HTM2003D supports automatically both HDTV and NTSC (line-doubled 1050i).
- ●HTM2003D permits automatic color temperature calibration when used with the ASP-15HD auto setup probe (Option). If a unique color temperature is stored in memory, multiple monitors can be automatically calibrated to the same color temperature.
- ●The HTM1003 can be operated by both AC and DC power supplies.
- •Exclusive models for HD SDI input/output are also available (20-inch: HTM2004, 10-inch: HTM1003).

■ Specifications

Page	■ Specifica	ations				LTM	2003D	
			HTM3203		HTM2003D		<1050 mode>	HTM1003
Finance per Second   30	●Input Signal Format				<1125 III00C2		TIOSO IIIOGO	
Appendix Reto   2   2   2   50   100   1	Scanning Lines							
Minimum   Mini	Frames per Second		30					30
Processor   Section   Processor   Section	Interlace Ratio		2:1		2:1			2:1
Vertical Scanning Programs   Vertical Scann	Aspect Ratio		16:9		16:9			16:9
Spring   S								
Victor   September   Septemb	Vertical Scanning Frequency		60Hz			60Hz	59.94Hz	60Hz
Vision   V	Input Signal Type		2ch	a alastable an	2ch	acleatable on front	2ch	2ch selectable on
Sync   Vision   Vis	Video							
Popul Signal Level				<u>'</u>		· ·	•	i e e e e e e e e e e e e e e e e e e e
Video	Sync		1ch	front panel		panel	Impossible	Impossible
Video   Pi.P.	●Input Signal Leve					1/0 4 01/	\/ 0 =\/	
Sync	Video							
Fig.14    Fig.	Video							
Action/Processing   Some in the pit impediations bright connection   Only	Sync SYNC		+/- 0.3Vp-p					
Video Output Level   10-line gun dot-type shadow mask high resolution CRT   Mask pitch   0.04/mm   In-line gun dot-type shadow mask high resolution CRT   Mask pitch   0.04/mm   In-line gun dot-type shadow mask high resolution CRT   Mask pitch   0.04/mm   In-line gun dot-type shadow mask high resolution CRT   Mask pitch   0.02/mm   Mask pitch   Ma		HD,HV						
In-line gur dot-type shadow mask high resolution CRT Mask pitch : 0.34mm msk high resolution CRT Mask pitch : 0.24mm msk high resolution CRT Mask pitch : 0.24mm shigh resolution CRT Mask pitch : 0.24mm ask high resolution CRT Mask pitch : 0.24mm and resolution in the pitch of the pitch in the pitc		<u></u>						
CRT	video Odiput Leve	<b>71</b>						
Screen Size (Wide Screen)	CRT					0 71		
Appet ratio : 16:9   Appet r			: 0.34mm		Mask pitch : 0.28mm			Mask pitch : 0.28mm
AC100V-120V, SO AC200V-240V, 60Hz, single phase   AC100V-120V 6090Hz, single phase   AC200V-240V, 6090Hz, 6090Hz	Scroon Size (Mide Scroon)		` , ` , ` ,					
Power Consumption	Goreen Size (wide Screen)		'			•		
Continuous   Installation Place	Input Voltage				, , ,			AC200V~240V, 50/60Hz, single phase
Installation Place	Power Consumption		450\	450VA or less		400V	A or less	90W orr less
Relative Humidity   10% - 90/(knon-condensing)   10% - 90/(knon-condensi	Operation							
Relative Humidity   10% - 90%(non-condensing)   10% - 90								
Dimensions   800(W) x 800(H) y 740(D)Pmm (31.5 x   450(W) x 399(H.5 x 544(D)Pmm (17.7 x   45.7 x 2.1 4 inches)   23.6 x 2.9 1 inches   24.7 x 2.1 4 inches)   24.7 x 2.1								
Excluding qum foot			800(W) x 600(H) x 740(D)mm (31.5 x		, ,		Ű,	W222 x H213 x D400mm
Resolution	(Excluding gum foot)				15.7 x 21.4 inches)		1.4 inches)	
Horizontal (at center) 1000 lines or more 900 lines or more 1000 lines			Approx. 80kg		Approx. 40kg		ox. 40kg	Approx. 11kg
Vertical   (al center)   750 lines or more   650 lines or more   400 lines or more		(at center)	1000 li	ines or more	9	00 lines or more	600 lines or more	500 lines or more
Voltage Fluctuations   Stable operation is ensured with +/-10½ inex or more   400 lines or more   400 li	rionzoniai							
Voltage Fluctuations   Stable operation is ensured with +/ 10% lines voltage fluctuations referenced to the rated value.	Vertical							
Frequency Response     With reference to rated output ref enceded to 500kHz, up to the R, G, B CRT drive (60Hz-25MHz + 1dB, 3dB 25MHz - 25MHz-30M	Voltage Fluctuation							the rated value
Aperture Correction   With reference to the rated output, up to the R, G, B CRT drive output from the S ag : 5% or less (with 60Hz square wave signal of line frequency of 10nS rise time)	Voltage i luctuation	115						
With reference to the rated output, up to the R, G, B CRT drive output from the S ag : 5% or less (wit h symmetrical square wave signal of line frequency of 10nS rise time)	Eroguanay Posponso		60Hz~25MHz					60Hz~17MHz +1dB,-3dB
Waveform Distortion  With reference to the rated output, up to the R, G, B CRT drive output from the S ag: 5% or less (with 60Hz square wave signal of line frequency of 10nS rise time)  +6dB or more is adjustable at 25MHz SMHz  with maximum aperture correction  With reference to the rated output, at R, G, B CRT, drive output with video input from the square wave signal of line frequency of 10nS rise time)  +6dB or more is adjustable at 25MHz SMHz SMHz  with maximum aperture correction level.  With reference to the rated output, at R, G, B CRT, drive output with video input from sperture correction level.  With reference to the rated output, at R, G, B CRT, drive output with video input from sperture correction level.  With reference to the rated output, at R, G, B CRT drive output with video input from maximum aperture correction level.  With reference to the rated output, at R, G, B CRT drive output with video input from the video input from maximum aperture correction level.  We video input terminal video input from the	Frequency Respo	Frequency Response						
Sag : 5% or less (with 60Hz square wave signal of 10S rise time)   Overshoot : 5% or less (with the symmetrical square wave signal of 10Ds rise time)   +6dB or more is adjustable at 28MHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture correction level.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture lowel.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture lowel.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture lowell.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture lowell.   +6dB or more is adjustable at 10MHz SMHz with maximum aperture lowell.   +6dB or more is adjustable at 20MBz and								. idea in it to main al
Aperture Correction  With reference to the rated output, at R, G, B CRT, drive output with video input from Synchronous: -46dB or more Random: -50dB or more Random: -50dB or more  Random: -50dB or more  Random: -50dB or more  Random: -50dB or more  Random: -50dB or more  Random: -50dB or more  Random: -50dB or more  Adustable to the rated picture size with an aspect ratio of 16: 9  Deflection Distortion  Within +1% of picture height (both deflection linearity and raster)  Pertical(V)  Apertual(V)  Apertual(V	Waveform Distortion							
Aperture Correction  with maximum aperture Correction level.  With reference to the rated output, at R, G, B CRT, drive output with video input from Synchronous: -46dB or more Random: -50dB or more Hum: -50dB or more Horizontal(H) Hor			Overshoot : 5% or less (wi th symmetrical square wave signal of line frequency					
Noise  With reference to the rated output, at R, G, B CRT, drive output with video input from Synchronous: -46dB or more Random: -50dB or more Hum: -50dB or Hum: -50	Aperture Correction		+6dB or more is adjusta ble at 25MHz 5MHz					
Noise  With reference to the rated output, at R, G, B CRT, drive output with video input from Synchronous: -46dB or more Random: -50dB or more Hum: -50dB or more Hum			with maximum aperture correction level.					
Noise	Noise		With reference to the rated output, at R. G. B CRT, drive output with video input from					
Random : .50dB or more Hum : .50dB or more Hum : .50dB or more Sync Stability Stable operation Deflection Amplitude Adustable to the rated picture size with an aspect ratio of 16: 9 Deflection Distortion Within +1% of picture height ( both deflection linearity and raster distortion)  Centering Control Horizontal(H) 10mm or more Vertical(V) 10mm or more Horizontal(H) 12% or less Vertical(V) 6% or lrss Horizontal(H) 12% or less Vertical(V) 6% or lrss Hum Oscillation 20x1 or less  Fligh Voltage Tolerance 2xkV +/- 1kV 2xkV +/- 1kV 2xkV +/- 1kV  Regulation 2xkV +/- 1kV 2xkV +/- 1kV 2xkV +/- 1kV 0xitor fluctuations of 0 to 600uA)+/-3 or less Inside a circle with diameter 90% of picture height : 0.5mm or less Inside a circle with diameter 90% of picture width : 0.7mm or less  Memory  ROM 16K byte 5xkV +/- 5xkV						Synchronous :		
Sync Stability  Deflection Amplitude  Adustable to the rated picture size with an aspect ratio of 16: 9  Deflection Distortion  Within +1% of picture height ( both deflection linearity and raster distortion )  Wether an aspect ratio of 16: 9  Centering Control  Horizontal(H)  Vertical(V)  Regulation  Pegulation  With reference to 300uA for fluctuations of 0 to 600uA)+/-3 or less Inside a circle with diameter 90% of picture width: 0.7mm or less  Memory  ROM  RAM  Possible operation  is ensured within +/-6dB referenced to the rated picture size with an aspect ratio of 16: 9  Value.  Value.  Value.  Value.  Value.  Value.  9  Value.  9  9  8  Value.  Value.  9  9  9  Convergence of picture height ( both deflection linearity and raster distortion )  10mm or more  10mm or more  12% or less  6% or Irss  12% or less  12% or less  128kV +/- 1kV  27kV +/- 1kV  20kV +/- 1kV  20kV +/- 1kV  10mm or less  10 to 300uA +/-3% or less  10 to								
Deflection Amplitude  Deflection Distortion  ■ Within +1% of picture height (both deflection linearity and raster distortion)  ■ Centering Control  ■ Horizontal(H)  ■ Retrace Time  ■ Horizontal(H)  ■ Vertical(V)  ■ Regulation  ■ Horizontal(H)  ■ Regulation  ■ Regulation  ■ Convergence  ■ Memory  ■ ROM  ■ RAM  ■ 16K byte  ■ Adustable to the rated picture size with an aspect ratio of 16: 9  ## Gritch and a spect ratio of 16: 9  ## distortion of 10: 10 mm or more  ## distortion of 12 mm or less  ## distortion of 12	Sync Stability		Code of fileto					value.
Deflection Distortion Within +1% of picture height (both deflection linearity and raster distortion )   ●Centering Control 10mm or more   Horizontal(H) 10mm or more   Vertical(V) 10mm or more   ■ Retrace Time 12% or less   Horizontal(H) 6% or lrss   Vertical(V) 6% or lrss   Hum Oscillation 0.2mm or less   ● High Voltage 28kV +/- 1kV 27kV +/- 1kV 20kV +/- 1kV   Regulation (With reference to 300uA for fluctuations of 0 to 600uA)+/-3 or less With reference to 100uA for fluctuations of 1 to 600uA)+/-3 or less   Inside a circle with diameter 90% of picture height: 0.5mm or less Inside a circle with diameter of 90% of picture height: 0.4mm or less   Inside a circle with diameter of 90% of picture width: 0.7mm or less Inside a circle with diameter of 90% of picture width: 0.5mm or less   ●Memory ROM 16K byte   ROM 16K byte   RAM 2K byte	Deflection Amplitude		· · · · · · · · · · · · · · · · · · ·					
Horizontal(H)			Within +1% of picture height (both deflection linearity and raster distortion)					
Vertical(V)       10mm or more         ●Retrace Time       12% or less         Horizontal(H)       12% or less         Vertical(V)       6% or Irss         Hum Oscillation       0.2mm or less         ●High Voltage       28kV +/- 1kV       27kV +/- 1kV       20kV +/- 1kV         Regulation       (With reference to 300uA for fluctuations of 0 to 600uA)+/-3 or less       With reference to 100uA for fluctuations of 0 to 300uA +/-3% or less         Inside a circle with diameter 90% of picture height: 0.5mm or less       Inside a circle with diameter of 90% of picture height: 0.4mm or less         Inside a circle with diameter of 90% of picture width: 0.7mm or less       Inside a circle with diameter of 90% of picture width: 0.5mm or less         ●Memory       16K byte          RAM       2K byte			10mm or more					
●Retrace Time       12% or less         Horizontal(H)       12% or less         Vertical(V)       6% or Irss         Hum Oscillation       0.2mm or less         ●High Voltage       28kV +/- 1kV       27kV +/- 1kV       20kV +/- 1kV         Regulation       (With reference to 300uA for fluctuations of 0 to 600uA)+/-3 or less       With reference to 100uA for fluctuations of 0 to 300uA +/-3% or less         Lonvergence       Inside a circle with diameter 90% of picture height: 0.5mm or less       Inside a circle with diameter of 90% of picture width: 0.5mm or less         Inside a circle with diameter of 90% of picture width: 0.7mm or less       Inside a circle with diameter of 90% of picture width: 0.5mm or less         PMemory       16K byte          RAM       16K byte          RAM       2K byte								
Vertical(V)       6% or Irss         Hum Oscillation       0.2mm or less         ● High Voltage       28kV +/- 1kV       27kV +/- 1kV       20kV +/- 1kV         Regulation       (With reference to 300uA for fluctuations of 0 to 600uA)+/-3 or less       With reference to 100uA for fluctuations of 0 to 300uA +/-3% or less         Inside a circle with diameter 90% of picture height: 0.5mm or less       Inside a circle with diameter of 90% of picture height: 0.4mm or less         Inside a circle with diameter 90% of picture width: 0.7mm or less       Inside a circle with diameter of 90% of picture width: 0.5mm or less         PMemory       ROM       16K byte          RAM       2K byte	●Retrace Time							
Hum Oscillation  ● High Voltage  Tolerance  Regulation  (With reference to 300uA for fluctuations of 0 to 600uA)+/-3 or less  Inside a circle with diameter 90% of picture height: 0.5mm or less  Inside a circle with diameter 90% of picture width: 0.7mm or less  ■ Memory  ROM  RAM  16K byte  0.2mm or less  27kV +/- 1kV  27k								
●High Voltage       28kV +/- 1kV       27kV +/- 1kV       20kV +/- 1kV         Regulation       (With reference to 300uA for fluctuations of 0 to 600uA)+/-3 or less       With reference to 100uA for fluctuations of 0 to 300uA +/-3% or less         Inside a circle with diameter 90% of picture height: 0.5mm or less       Inside a circle with diameter of 90% of picture height: 0.4mm or less         Inside a circle with diameter 90% of picture width: 0.7mm or less       Inside a circle with diameter of 90% of picture width: 0.5mm or less         Inside a circle with diameter of 90% of picture width: 0.7mm or less       Inside a circle with diameter of 90% of picture width: 0.5mm or less         Inside a circle with diameter of 90% of picture width: 0.5mm or less       Inside a circle with diameter of 90% of picture width: 0.5mm or less								
Tolerance  28kV +/- 1kV  27kV +/- 1kV  20kV						U.ZIIII	2000	
Regulation  uations of 0 to 600uA)+/-3 or less  Unside a circle with diameter 90% of picture height: 0.5mm or less  Inside a circle with diameter 90% of picture height: 0.5mm or less  Inside a circle with diameter of 90% of picture height: 0.4mm or less  Inside a circle with diameter of 90% of picture width: 0.5mm or less  Inside a circle with diameter of 90% of picture width: 0.5mm or less  Inside a circle with diameter of 90% of picture width: 0.5mm or less  Inside a circle with diameter of 90% of picture width: 0.5mm or less  Inside a circle with diameter of 90% of picture width: 0.5mm or less  Inside a circle with diameter of 90% of picture width: 0.5mm or less  Inside a circle with diameter of 90% of picture width: 0.5mm or less  Inside a circle with diameter of 90% of picture width: 0.5mm or less  Inside a circle with diameter of 90% of picture width: 0.5mm or less  Inside a circle with diameter of 90% of picture width: 0.5mm or less  Inside a circle with diameter of 90% of picture width: 0.5mm or less  Inside a circle with diameter of 90% of picture width: 0.5mm or less  Inside a circle with diameter of 90% of picture width: 0.5mm or less  Inside a circle with diameter of 90% of picture width: 0.5mm or less  Inside a circle with diameter of 90% of picture width: 0.5mm or less						27kV	+/- 1kV	20kV +/- 1kV
Convergence  Inside a circle with diameter 90% of picture height: 0.4mm or less  Inside a circle with diameter 90% of picture height: 0.5mm or less  Inside a circle with diameter 90% of picture width: 0.7mm or less  Memory  ROM  16K byte  18K byte	Regulation		,			With refe	rence to 100uA for fluctuations	of 0 to 300uA +/-3% or less
Convergence   picture neight: 0.5mm or less   Inside a circle with diameter 90% of picture width: 0.5mm or less    •Memory   ROM   16K byte     RAM   2K byte			Inside a circle with diameter 90% of			Insid	e a circle with diameter of 90%	of picture height : 0.4mm or less
●Memory         ROM         16K byte            RAM         2K byte	Convergence		Inside a circle with diameter 90% of					, ,
ROM         16K byte            RAM         2K byte			picture width: 0.	7mm or less		IIISIO	c a circle with diameter or 90%	or picture within . 0.5min of less
RAM 2K byte				101/	hyto			
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## HTM3203/2003D/1003



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